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Damp Bodies and Smoky Firewood: Material Weather and Livelihood in Rural Himachal Pradesh

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Weather patterns are sets of expected forces and substances which slot into the agricultural and ritual year. In the intersections between risky weathers and the materials which matter for people, knowledge is developed and used. Knowledge of potential risk is expressed in fodder collection practices and care of the chilled body. These material interactions are about safeguarding life and household and therefore livelihood. Applying theory on materiality and risk to livelihood practices in the face of weather, daily life emerges as a site of practical knowledge use. Assessing risk and dealing with the physical vulnerabilities in bodies and other relevant material entities thus become a core element of rural life. Given this, understanding the materials becomes a priority. Risk is knowledge of material interaction – for the subsistence of people.

Keywords: weather; Himachal Pradesh; risk; India; knowledge

Material livelihood

Getting up fully dressed, after a bite to eat and a cup of tea, unmarried Anupriya would sharpen her sickle on the whetstone, pouring water over the blade to rinse it. Then she would leave, rope in hand, mobile phone secreted on her person. Other women would be walking along the same paths, going together along the steep mountainside and then peeling off as they reached their family pastureland.

While going for fodder, Anupriya would most often be walking along a path with a steep drop to one side. On the way to the tree, she would see the fields, her own in particular but also neighbours', marking here poor growth of wheat (winter), and there the mark of where a leopard dragged a buffalo calf across a field or perhaps greeting someone spreading manure (during monsoon). This greeting would be shouted, as would any questions, reprimands or news. Some way below the path would be forest, river, scree and wild places – *jangel*. Fodder trees, pollarded all, lined the terraced fields, and family grasslands were on the shoulder of the hill, below the fields or below the small white temple on the hill.

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Having reached the designated spot, bunching the grass in one hand and slicing with the sickle in the other, Anupriya would pile up dense bundles of grass. Or, climbing up a tree, balancing on unlikely looking branches, she would hack off long leafy batons, to be gathered where they fell below.

Then she would make her way home, slowly, with the bundles of leafy twigs bound up and tied together with her rope and balanced on her head. She might meet someone on the path and rest under the shade of a tree where three paths meet, or laughingly refuse an offer of tea at a house she walked past. Once home, she would walk past the kitchen and living area, heading for the animal house where she would dump her bundle on the ground, out of reach of the interested buffalo. Untying the rope, if it was feeding time, she would unbundle some of the leafy twigs and hand them in to the calf or put them in front of the buffalo.

Introduction

What do we risk by living? How do people cope or even thrive with uncertainties from moment to moment? We know the material world around us in terms of the qualities of what we know and encounter – hard or wet. We also know the world in terms of the potentialities of these materials for our use. These include weather properties, how a material will be affected by cold, heat, moisture and the movement of air. Knowledge of these weather encounters allows people to assess risk in a given context: risk of rotting, risk of falling ill or risk of tripping. These risks are not only to bodies, but also to the subsistence landscape around them.

Livelihood in Gau, a village in the Indian Himalayas, is bound up with the materials which the villagers shift and process. Weather impacts on these materials, as well as on the bodies of the workers. Rain can cause illness and accident, and affect the stuff of livelihood, the fodder and the firewood, as well as the bodies of people in Gau. Weather thus has material effects which are known. So the knowledge of the weather vulnerabilities of livelihood materials and bodies in Gau is bound up in the practices of handling and modifying these substances.

My purpose in this article is to explore how knowledge of these intersections and potential encounters (of weather acting on livelihood materials) makes up lived action. Viewing human, animal and plant organisms as material allows for these to be vulnerable to the material influence of the weather, each according to their properties. My examples are the fodder and the firewood, which is a byproduct of fodder collection. Materials are permeated by warmth, chill and damp. They are buffeted by the wind. Knowing and dealing with these differing physical vulnerabilities and averting riskare part of how people live in and with our environments. Perhaps the potential intersections of weather materials *are* the risks.

Many today are seeking to understand weather risks affecting places all over the world. I argue that in commencing an inquiry on materials and the effects that weather has on these (including material bodies), it may be more straightforward to

get to the risks that matter the most to people. I also hope to illustrate how this approach takes livelihood seriously. I use data from Economic and Social Research Council-funded research in Gau, a village in Himachal Pradesh, India.

Starting with some context for readers less familiar with the work on weather and climate change in anthropology, I then establish my ethnographic research site and the methods I used for this work. Exploring the concept of risk, I illustrate this with accident and then illness as rain-related risks in Gau. Following this, how materials make up the stuff of livelihood and daily work in Gau is discussed, focusing around the example of fodder collecting. Firewood and its vulnerability to rain make a complementary example, and then I bring it all together in the conclusion.

Climate change as weather for people

Background

Weather is experienced and known as it washes over a place and people's lives. Weather can make landscape what it is. Bloch's study of the Zafimaniry of Madagascar (1995), for instance, describes the mountainous, forested landscape, prone to fog and mist. Villages would be built in high places, so as to have a clear view. Deforestation, which gives a clearer view, was seen by the Zafimaniry as a good thing. Bloch's observations show that even something as ephemeral-seeming as fog or mist has definite implications to the extent that people might alter the landscape partly in response to it. Similarly, according to Levi-Strauss, fog is something that can link the landscape with the sky or separate them; it can close off spaces or open doors to other worlds (1995, p. 8). Mist on the mountain in Gau was associated with negative effects – not only of getting lost (as with the song about the little girl herding the oxen), but also of visibility. The importance of visibility in seeing the weather, animals, other people or other reasons meant that like Bloch's Zafimaniry (1995), the *pahari* people I worked with talked of mist and fog in negative ways and valued clarity in the air. Weathering wears away physical forms, frames the view, shapes the experience and causes linkages and divides. Weather can also be risky.

While weather is something that people have always lived with and responded to, the current increasingly variable weathers pose concerns for many. Anthropogenic climate change is a political issue, 'a threat multiplier. It magnifies and exacerbates existing . . . problems' (Crate and Nuttall, 2009, p. 11) and differentiates CO_2 emitters and those affected (Solomon, 2007) in a 'tragedy of the global commons' (Verweij et al., 2006, p. 825). Rayner (1989), Batterbury (2008), Crate (2008) and Lindisfarne (2010) have all written emphatic calls for anthropologists to orient their work towards climate change. This call has been answered by research on the political and communications side of climate change, mitigation and more, ranging from islands disappearing (Rudiak-Gould, 2013) to glacial melt (Cruikshank, 2005). Climate change is affecting fieldsites and peoples' practices in interaction with the environment all over

the world. Edited volumes such as Crate and Nuttall (2009), Strauss and Orlove (2003) and Hastrup (2009) explore the various dimensions of the impact and importance of weather and climate change. See Baer and Singer (2014) for an up-to-date review of anthropological work on climate change.

Weather is part of the landscape, raindrops falling on leaves, wind causing dust to rise, and when the weather changes, so does the landscape. 'For the people living in the Arctic the environmental changes are not external to their lives' (Hastrup, 2009, p. 186). In the Imperial Gazetteer from 1885, the climate of the then densely forested southern Sirmaur was correlated to land use: 'Cultivation is, however, steadily spreading; and with the clearance of the jungle, the climate will approximate to that of the neighbouring Dehra Dun' (Hunter, 1885, p. 556). In India, therefore, as in the Arctic, changes in weather patterns are impacting on people's lives. To understand what the weather is changing (from climate change, deforestation or other causes) means one has to comprehend what it meant in the first place. 'Peoples behaviour to the world around them depends on their view of their place in relation to it' (Haberman, 2006, p. 18). Beliefs about weather make up part of a textured value-laden environment and form actions. In anthropology, belief and knowledge are several names for the same thing. Knowledge is always knowledge *for* people, that is, their justified beliefs. So knowledge of weather shapes people's actions. Who are these people? The next section describes the mountainous area in question, and explores some of the issues around conducting ethnographic research, before we move on to looking at the material qualities of fodder and firewood in Gau in the rain.

Context

A village in Himachal Pradesh, India

The *pahari* village in Himachal Pradesh, north India, where I did fieldwork is situated on a mountainside and surrounded by terraced fields. It produced two or three crops a year (wheat, maize and beans (to eat) and tomato, ginger and mustard (to sell)); buffaloes and cows were kept for dairy and goats for meat. The spatial axis was to a large degree vertical – the hillside would be both above and below and being up or down had implications for temperature, visibility and moisture levels. Labour, including fetching fodder, milking, carrying manure and washing clothes, would happen outside. Roads, electricity, piped water and schools would connect, alongside longer-standing paths, oral traditions and trade. Berreman (1975) and Parmar (1975) wrote about the polyandry (as well as polygyny) in the Pahari region, for which it has remained famous within anthropology. North of this region, people start identifying as Buddhist and to the south is the Gangetic plain.

The weather in the village was most frequently summarised by its inhabitants as 'not too hot, not too cold' in contrast to the 40 degree plus summers of the plains and the snowy mountains further north. In specific situations, though, heat, cold and

excessive or absent rain would be complained about and the general trends of year-round warming and heavier but less reliable rains ubiquitously acknowledged. In the time I lived there, winter rain had been irregular compared to what people expected and the onset of monsoon was very late in 2012, and both early and heavy in 2013. When the start of the monsoon is so heavy, exclaimed Anupriya[1] (22) to me, how will the second month be? Which she explained is normally subject to heavier rains. This was affecting work rhythms, subsistence and cash yields and trust in the reliability of the environment. The government ration shop would mitigate this when people had cash to buy the subsidised grains, oil and other basics.

The landscape around the village was divided into summer, winter and rainy season use. Certain hillsides were appreciated for being warmer even if farther away, and so were preferred on chilly winter mornings when cutting grass for fodder, for instance. Activity was fairly continuous for both men and women, unlike in Uttarakhand, where men did much less agricultural work (Mawdsley, 1998, p. 43).

During my time in the village, villagers would huddle under quilts, sleep in their clothes, eat and cook according to the weather and season. Sometimes they would work in the rain, as livelihood imperatives would override short-term considerations of health. Children would play barefoot in hail. Through the experiences that made up life for *pahari* men, women and children, the encounter with weather was a material one. This is the knowledge of substances and how they will interact. A flowing knowledge, a shifting repositioning of limbs and focus in moment-to-moment weather-observation and action.

Method

To learn about how people experienced and lived with weather in the village, I lived there for 10 months in 2012/2013, going back to visit for 3 weeks in February 2014. I slept in an upper room with the daughter and son in the family, on quilts which we would stack away during the daytime. I paid monthly rent to the family, and ate with them until the last few months when a kitchen became free which I could use to cook my own food. We ate inside, sitting on plastic sacking on the floor, rice with beans and maize and wheat flour *chapattis*. During the day I would go with women to get grass for their buffalo to eat, or to harvest onion leaves for food, or to spread manure on the fields. Or, I would go around the village chatting with people and doing interviews here and there. They knew that I was there to learn, and I repeatedly told them I was studying the weather '*mausam*', but when they repeated it back to me or told others about me it would tend to be about that I was learning about local traditions and old things. My communication with villagers was in Hindi, though the local *pahari*

[1]All names are changed. In referring to people by name, I am following the western European norm, in the village any person older than me is referred to by title only ('elder paternal uncle', 'grandmother', 'sister-in-law') from my adopted position as a returned daughter of the village.

language was also spoken. I wrote my notes sitting on the veranda, and women and children would come and watch me typing, or to borrow my nail varnish. Once, Anupriya saw my proposal document on my kindle and asked me how it works, will I write all my notes down together and then it will be finished. Another time, a woman asked if I was doing the research for a joke: would I be taking back the information about polygynandrous marriage systems (which I had been asking her about) and laugh about it back in my place. But mostly my material was uninteresting to my informants. They knew what their lives were like. They were more interested in the question of how old people are cared for where I come from, and why my nose was not pierced.

This technique of living with people in order to learn about them and their lives is at the core of classical anthropological data collection. With social interactions, observations and interviews as the method, the researcher is part of the research process. 'Anthropology is an interpretive science. Its object of study, humanity encountered as Other, is on the same epistemological level as it is . . . there is no privileged position, no absolute perspective' (Rabinow, 1977, p. 151). At the same time, anthropologists are outside their own culture as well as that which they study, an exile and fundamentally unable to fully participate. Therefore, Gardners' statement that 'Personally, I do not have any one view on purdah' (1999, p. 54), represents an important facet of reality for the anthropologist. S/he is between several fairly tightly woven webs of subjective opinion/meaning and cannot adopt one without rejecting the other. So s/he sits, well-informed, 'on the fence' in a kind of limbo that can be paralysing or enabling in the analytical process.

During fieldwork I found that 'knowledge . . . is a social phenomenon' (Hastrup, 2004, p. 456); it comes into being *between* people. Surface evidences accumulate during fieldwork, a process of slow discovery – uncovering, sorting and interpreting. The work for me, then, was about translating that social knowledge into something that could make sense when written in English for a very different audience. It is in the tensions between what I learnt to be in the village and what was important to who I was before that useful knowledge was produced. In the sorting process during and after fieldwork, fieldnotes, experiences, memories and interviews come together with reading other people's work to make sense of what one learnt and what can be communicated.

Weather risk

Knowledge of risk as knowledge of materials

> The ability to sense and avoid harmful environmental conditions is necessary for the survival of all living organisms. Survival is also aided by an ability to codify and learn from past experience. Humans have an additional capability that allows them to alter their environment as well as respond to it. This capacity both creates and reduces risk. (Slovic, 1987, p. 280)

Weather risks and their impacts change with regard to what they impact on.[2] Risk is a term for that which is potentially non-beneficial for human beings. Rain and other weathers both threaten people's lives and facilitate agriculture and fodder collection. Risk is not death. It is the uncertain space intermediary towards the possibility of death:in the *pahari* village, that is to say, illness or accident to people, animals or crops. The fine-tuned knowledge of these potential weather risks is of how different weathers differently impact or pervade bodies, food and pre-food materials, such as fodder and firewood.

Perceptions of danger or risk as well as reactions to these are social and political rather than 'rational' the world over (Douglas, 1992). Vera-Sanso in Caplan (2000) critiques Beck's 'contention that [in] traditional society . . . a preoccupation with risk similar to in the West would not occur' (Vera-Sanso, 2000, p. 21). She argues that India is also a 'risk society', criticising Beck's focus on technological risks as such, saying 'It is not technology itself which people worry about, but how society is organised, what its impacts are on the individual, where power lies and how it is managed, as well as the impact of individuals on society' (Vera-Sanso, 2000, p. 128). Her chapter illustrates this, exploring the threat women pose to society in Chennai, South India, and how limits to their economic activity are part of how society limits this risk. I will consider the risks in Gau from the rain in this article. Beck explicitly connects risk to knowledge:

> Risks are essentially, man-made, incalculable, uninsurable threats and catastrophes which are *anticipated* but which often remain invisible and therefore depend on how they become defined and contested in 'knowledge'. (Beck, 2010, p. 261, emphasis in original)

This knowledge is, I argue in this article, knowledge of materials. 'In considering risk, knowledge assumes great significance' (Caplan, 2000, p. 21). Knowledge is contested in the realm of risks. Beck wrote that risks 'can . . . be changed, magnified, dramatised or minimised within knowledge, and to that extent they are particularly *open to social definition and construction*' (cited with emphasis in Adams, 1995, p. 181). Risk knowledge, this means, is part of how people understand their environment and their actions and is thus as contingent and context dependent as other forms of knowledge. Bringing it back to weather, one of the risks and impacts of weather in Gau is the potential for accident.

Accident

Storms and high winds in Gau could knock loose roof tiles or trees – which might potentially fall on people, I was told. The steep vertical orientation of the landscape more generally was associated with the risk of falling. Karishma's father, cutting grass near us one day, repeatedly asked me to be careful – she joked with him,

[2]Uttarakhand floods in 2013 and the building of many insecure cement buildings.

having collected fodder with me before, knowing I was not about to fall. A girl from the neighbouring village did fall off that hill, though, during my fieldwork time. Her skull split open, Anupriya explained to me, with a touch of relish in the grisly details. Wet paths and branches can be slippery. There were many broken bones in the village – most from falling out of trees while cutting fodder. On my way back to where I was living in January 2013, Anjana, a neighbouring girl who was engaged, called me over. I kept asking people (since I got back) has anything happened. They always say 'nothing'. But Anjana told me that Kali's dad fell out of a tree where he was getting leafy branches, and hurt his head quite badly. This was last week. He has been to the doctor, and is back now, but apparently it is serious. I sat with Anjana. She has a naughty goat which keeps running away, and sort of does a skipping thing. Also her brother (who has broken his leg, which is not better yet, even after 3 months) was hanging around.

Another time Karishma, Pihu (10) and I were out to get leafy branches, and she was wondering aloud whether to get the fresh leaves or the drier ones. The buffalo does not like the drier ones as much. But we ended up getting the drier ones because she decided she could then keep the other tree for another day. That was the day that she was encouraging me to climb the tree again: 'nothing will happen to you', she said, '*kuch nahi hoga*'. 'Yes', I said, 'like nothing happened to Kali's father'. This made her laugh. She retold the joke to others later. I went up the tree a bit and cut some, though I could only do it with one hand, not with one to grab the little branches as she does. I did not trust my balance enough, as there had been too many tree-related injuries. Also, the wind was shaking the tree, and the barbed wire near the bottom made it hard to get up into. Little Pihu was collecting little-girl-sized bits of firewood to make into a bundle,and tickled me once I had climbed down.

Rain would also cause landslides, leading to delays and obstructions to visiting the natal village for a married woman, or getting to work for a man migrating for labour. It thundered and rained during the night in February 2013 and in the morning Karishma came in, borrowed a blue pen and told me the news. A car had fallen off the road the day before and the younger brother of a wife in the village had died. Poonam Devi went to condole. Two car accidents had happened on the way to the wedding in the village, despite the constant rain and fog. Anupriya said those were not fatal, one involved Anjana's elder sister's son, but he was ok. They had left the car, gone to a village and then when they got back, the car had fallen off the road, down the mountainside.

An elderly lady told me emphatically on a return visit to the village in February 2014 that 'there is no danger' (*khatra*). However, she conceded that people do sometimes fall and break bones. I took this as part of the normal feedback people in Gau would give each other (and the inept anthropologist), with regard to action as appropriate or not, sometimes with background on what could go wrong. With regard to fodder, though one ought not to risk getting ill by going out imprudently in cold rain, not going for fodder because of the danger of falling was not acceptable,at least on the surface.

This social context is of livelihood skills and moral knowledge – what is appropriate action. But it is also, in particular, about knowledge of materials and the material properties of things. Risk is thus a kind of knowledge that imbues materials and actions with their moral properties in relation to humans and 'looking at the risks which societies choose to highlight and how they deal with them tells us a great deal about their values, morality and politics' (Caplan, 2000, p. 24). It is the knowledge of the material properties of weather and how these potentially impact on other materials that constitute weather risks. This is not only of accident, but also of the body going wrong, of illness.

Illness

Human bodies are material and vulnerable to extremes in a very physical way – to freezing, overheating and getting wet. '[T]he body is moreover a thing' (Ingold, 2012, p. 11). Bodies, like other material composites, do not react to weather in a linear way. Their relationships with heat and cold are tempered by factors such as metabolism, movement, adapted habit and clothing. There are cutoff points in the endurance of weather, such as when water freezes, where the risk of negative consequences can rise sharply. It is bodies that are at risk, whether directly or indirectly, that know and handle risk in their movements. While sitting on plastic sacking outside Anjana's house one day, I asked the grown-up girls from a few neighbouring houses what they do to stay warm in the cold mornings. They talked about the morning as a time when you feel cold, but you soak *senkne* in the heat by the fire and then you go out to work (for fodder), and you get warm through working. The risk avoided is significantly a risk of illness. When I asked about why people would not go out and work in the cold rain, or during the heat of the day in the hot season, the answer was always about the need to avoid falling ill.

Fever and cold were the main illnesses people talked of, both caused by exposure to the weather – heat, cold and soaking rain. These exposures happened during the carrying out of work such as fetching fodder. Becoming drenched '*bhigna*' in rain causes a cold, '*zhukam*' or fever '*bhukar*'. But you also soak (*senkna*) in sunshine, or heat from the fire. Weather, then, meets the sensing body through rain and heat that does not stop at the outer boundary of the skin. Illnesses such as stomach pain may be defined as hot or cold by the location of the pain. Drinking cold water or bathing too early, or washing clothes in cold water would make you ill, Poonam Devi and others who were around would tell me, particularly when I was doing those things. Much of what I learnt in the village about appropriate action around handling the body was when I was told how to act myself. My ignorance of the right thing to do would prompt everyone, from small children to old ladies, to let me know what I should be doing. Having got soaked in the cold rain one day on returning to the village, both Anupriya and Karishma, when advised of pain in my stomach, told me to drink hot water, change my clothes and sit by the

fire. Spending just 10 minutes in front of the fire did change how I felt. And they let me know that, though slow, I was learning how to live properly.

Food was classified as either hot or cold, so eating too much hot food when you have a heat-related illness could cause you to become more ill, for instance. Karishma's father said that in the cold if you eat something bad it stays in you. The effect is greater. If you do so in the summer, then it will leave you, through your sweat and so on. But in the cold it is riskier. When I ate lemons or tomatoes in winter, I was told not to as they are 'cold'. *Daal* (bean or lentil stew) was counted as 'cold' but still eaten. *Ghi* (clarified butter) would warm you up. The warming effect from eating meat was frequently mentioned as a reason to 'cut' (kill) the goat – to keep warm. Late on a cold winter evening as we were going to bed, Anupriya said 'when the rain comes, after that it gets warmer, as the rain disperses the mist. Now it is colder, because of the mist. Then we eat meat and get warm.' So the body was managed by domestic thermal regulation such as the fire, by choosing when to go out and do necessary workand by treating it to avoid weather-related illnesses. As with other materials, it was heated, cooled and added to. This is not an argument claiming that people in Gau only related to the material, there were plenty of invisible forces and other features of life, but in this context I am focusing on the material aspects of life and how they relate to weather forces.

On winter evenings, the embers from the fire were heaped in a pan *angiti* and taken in to where the family was sitting and eating.They warmed the space while producing minimal smoke. The fire would also be a place to gather. Kitchens were often small and the family huddled round the fire, while neighbours would sit on the doorstep to exchange gossip or get embers to start their own fire. As a temperature modifier, both directly through heat to people's bodies, and indirectly through tea, warm water (given even to buffalo to drink when it was cold) and food, the fire was a part of daily thermal regulation. Soaking in the heat of the fire, changing clothes and drinking tea were the response to the cold drenching rain, to ward off the material risk of becoming ill.

So weather and risk are related to health and to accidents on the road, on the path or up a tree.

The knowledge of risk is, as I argue throughout this article, a knowledge of materials, and these are subsistence materials, materials for the upkeep of life.

Livelihood materials

Interactions with the physical world as knowledgeable manipulations of risk

My material focus originates in the prevalence of physical activity and agro-pastoral materials processing that was carried out in the village of Gau. Most of what people were doing all day would be about things, moving materials around and changing or affecting them. The stuff of work was the stuff of food, and thereby the stuff of

continuing life. The people I spoke with were preoccupied with the material, though with a healthy fear of ghosts and regular observance of religious duties.

The anthropological literature on the material is wide enough almost to constitute a sub-discipline. I will not review it here, but have found some of Ingold's thoughts to be of interest in connecting the material to that which is alive. In Gau people and the fodder they collect are both alive, and thus are both changeable and material. According to Ingold, the relational and interactive 'meshwork' of material (including living) things encompasses ourselves as well as what is around us (2012, p. 2). In this understanding, no given object or being is privileged, but in the movements and reactions between them, life happens.

> the prevailing emphasis on materiality obstructs our understanding of the fields of force and circulations of materials that actually give rise to things and that are constitutive of the web of life . . . once things have been cut off from their source of vitality in flows of energy and materials, their . . . liveliness, and capacities for perception and response are stopped. (Ingold, 2012, p. 2)

Here Ingold encourages a lens that picks up on both matter and movement. When things are both material and in living interaction with each other, they become active. When things are active, it becomes possible to build an understanding of an *interaction* with things and forces in the world, rather than an *operation* of a subject on a passive, static set of objects and persons. Being open to flows rather than things in isolation makes sense when looking at weather, which is defined by its movement – rays of sunlight, and movement of wind and water. It also brings the interaction of weather on the materials of livelihood in Gau to life, where the weather effects on these materials – ripening, drying, rotting and even causing illness – are part of continuous flows, known by villagers. People are 'practitioners who follow the flow' (Ingold, 2011, p. 211) of the forceful materials around them. In particular, as I have tried to stick with this example throughout, it is the fodder gathering which stands in for livelihood work in Gau.

Fodder. Gathering in the face of risk

Livelihood as the daily processing of materials

Rain facilitates the availability of fodder, which makes possible milk, meat and manure, as well as firewood. These beneficial consequences result after fodder gatherers have navigated a complex route of risks and potential excesses (of heat, cold, moisture and buffeting). This daily work would draw on knowledge of the body and of the nature of fodder materials. Though I have used examples of fodder collection throughout this article, in this section I would like to contextualise it as work in Gau. The material weather risk of rain would be both to the body as potentially causing accident or illness, and also, more mundanely, to the fodder itself, rendering it a heavy and

harder work to carry back, particularly during the monsoon. So fodder collection as work, as part of the people's livelihoods, is connected more clearly to their lives, which are bound up in dairy production, which necessitates fodder in the first place, and food consumption, which requires firewood, a side product of fodder collection.

One of the major agro-pastoralist livelihood practices in Gau (as should be clear by now) was the harvesting and carrying of fodder for the stall-fed lactating bovines, which was a daily activity for many people in the village. *Pahari* people – men as well as women – would go out first thing in the morning and again later in the day to harvest and transport fodder. Going for fodder was not only related to other people – family members as a household duty, neighbours for company and as potential encroachers – but was also a way to deal with an environment from which food did not simply spring.

One day Anupriya and I were out below the village cutting fodder. She was cutting fodder in a tree by a field and I was collecting the leafy branches which fell, into piles ready for carrying. From up in the tree she told me how she had joked on the phone with a boy, saying how she does not know how to work, and the boy quoted a common saying: a girl went to be married, saying 'I don't know how to work,' and they said, well we have others in the house who can do the job of eating, we do not need you to do that job'. Work in the village played a major role in people's lives and concerns. Work, as the boy had pointed out, was closely associated with providing food for oneself and one's family. Gathering fodder was one way in which this was effected, as plentiful grass and leafy twigs ensured a steady supply of animal protein in the shape of cow and buffalo milk and related dairy products.

Work would be done throughout the day in Gau. This was the practical dealing with materials, processing and coaxing them into new forms. The imperative to work formed life in the village. The 'right to subsistence' (Scott, 1976, p. 11), though the economy in Gau was mixed, was with the cash crops and migrating family members and other odd jobs providing cash. I asked a junior co-wife how she and her co-wife work:

> when you and your 'elder sister' are both at home, how do you [pl] do work?[3]
>
> we work in accord. For instance I look after the animals and elder sister makes food. I fetch fodder, but don't climb up in the trees, but 'elder sister' can climb and from the trees can cut the leaves. These days the children fetch the leaves (because 'elder sister's arm is hurting).[4]

Her co-wife had broken her arm falling out of a tree some months earlier. What was included in work was work of the household, related to sustaining the household and maintenance of all its parts and members. Replastering the walls of the animal

[3]Jab aapke didi aur aap dono ghar pe hai, to aap kaise kam karte hai?

[4]Ham miljulkar kam karte hai. Jaise me pashu ko dekti hu aur didi khana banati hai. Me ghas leti hu, likhin perd ke uper nahi chalti hu, likin didi chal sakti hai, aur perd se patti kat sakti hai. Aajkal bacche patti lete hai (kyoki didi ki baju me dard hai).

house, for instance, before the spring festival, or clearing the mint plant (because snakes might hide there during the monsoon, as Kali's grandfather explained to me). The moving body carried out physical tasks for much of the day – lifting, carrying, processing, cutting, milking and walking.

In Gau people would relocate materials from one place to another in order to undertake tasks that relate to the materiality of the body in fundamental ways. Weights of green leaves and dry grass would be shifted for the consumption of the cud-chewers, which they would process into further materials of white milk, red meat and black manure. But the qualities of the material were not unrelated to its efficacy. So dry leaves would be less willingly imbibed than fresh, juicy ones, and the leaves of certain trees would cause mild hallucination and illness, and death of the animal if consumed in sufficient quantities.[5] The knowledge that the villager has in dealing with the substances around would be necessarily nuanced, as the stakes could be life and death.

The materiality of livelihood is about the body as material, and also about the surroundings as material, which are *for* the body. That is to say, the risks and opportunities they present are systematically directed towards livelihood. Fodder collection, one of the most ubiquitous tasks of daily life, illustrates the actions and reactions in which materials and their properties would be known and treated accordingly. Rain would act as an ongoing source of risk to the material environment. What else does it threaten in its corroding, permeating, forceful materiality?

Firewood

The soaking properties of cold rain

Firewood, a by-product of fodder collection, is also at risk from rain. Through the three days of winter rain that came about five times a winter, and the more frequent, though less lasting rain of the monsoon, having dry firewood was about avoiding the discomfort of smoke and being able to cook food, heat water and stay warm. The firewood came from the long twigs which had leaves on them before these were eaten by the goats and bovids. In winter the tree scheduled for pollarding would be one of two or three species, and in summer another (according to when the leaves grew), and in the monsoon trees were not cut; the wet, green grass was enjoyed by the buffalo. After cutting, five or eight bunches would be tied together with the rope and hoisted onto the head (or, for men, on the back) for carrying. Resting happened on the way at habitual shady spots. At the animal house it would be stored or immediately fed to the buffalo, cows or goats. Later the stripped twigs would be bundled using 1 twig, split down the middle, for string, and put to dry for firewood.

On returning from cutting grass for fodder in winter, I was encouraged to *senkne* ('to warm', 'to dry before the fire', also used for 'to bask in the winter sun'; Macgregor,

[5]A goat which died was ascribed to have eaten more of these leaves than her companions. We still ate her meat.

1993) the heat from the fire. The fire – fed with firewood from fodder collection – is part of domestic thermal regulation. The regulation of temperature in spaces and especially bodies as well as of that which they consume or are in touch with is a major risk aversion practice. The constant feedback on appropriate handling of the hot and the cold informs the researcher on the salience of correct practice in avoiding risk – in this instance, illness and discomfort.

Specifically, *the knowledge of how materials interact* is what constitutes risk. The fire would be part of the fodder cycle, as firewood was the pollarded branches from which the animals had eaten the leaves off, and which had been dried in the summer for the monsoon and winter. Before use firewood might be stacked under an eave, upstairs in the animal house or outside on the slate courtyard. If it rained, either during monsoon in July–August, or during one of the heavy bursts of rain that periodically occurs during winter, the firewood would get wet if not moved or covered. When it started raining, the women around me would be unconcerned and carry on with whatever they were doing until they judged the rain heavy enough to warrant going out to cover or move the firewood (for the imminent use, stack at least). Unlike in the plains, then, animal manure could be used for the fields, and there was little need for illegal woodcutting in the forest. Though some families had an electric ring for cooking, *rotis* (flat wheat or maize bread) were only made on the fire. Using this fire, people in the village would warm themselves, heat water and cook food.

Conclusion

How people know material weather risk

The potential negative consequences *pahari* villagers told me about are the risks they live with. Becoming ill, falling from a tree or down the mountain, and getting hit by a falling slate from a roof are negative potentialities that stare at the body. The body feels discomfort, senses fear, observes and averts risk. The body experiences heat, cold, dry and wet. Risk is not only about sensation but also about the intangible. Risk of disease is not visible; misfortune may befall from that which is not seen. The gust of wind which finally fells the tree cannot be seen as it coasts over the mountains.[6]

In undertaking actions towards sustaining life, there are risks to the *pahari* person as a body, and also to the success of their actions which may have later implications for the fulfillment of the subsistence imperative. These risks are material, and in countering or anticipating them it is knowledge which shapes them in the shared social norms. So although weather does damage in material terms, it inhabits the realm of knowledge while it remains a risk, as yet unrealised at a given point. The proximate motivators for action are thus propelling towards food provision, but they are socially framed 'what would people say if the cow was not fed this morning?' following Douglas (1992).

[6]This connects to why witchcraft is another facet of dealing with risk – with comprehensible social motivations for similar effects to incomprehensible physical effects.

The materials villagers engage with are perishable; they risk perishing if they come in contact with specific weathers. The window of their usefulness to *pahari* people ends. The qualities of materials are what are known by those who live with them. Giddens (1991) wrote that risk is a dimension of the future which affects decisions in the present. These decisions could be said to be made with risks in mind, though another way of understanding it is that they are made based on the potentials inherent in materials, material flows and their interactions. Such ways of knowing and dealing with material substances and by extension risks may characterise all human life and action. This knowledge transmits like other knowledge, by example, scolding, trial and error. And this knowledge is a knowledge of risk.

Materiality may be a way of understanding (knowing) risk. Substances and forces come out of the sky and down towards the rocks, soil and living beings. The weather flows towards and alters materials. Materials are vulnerable to moisture, temperature and the movement of air. Knowledge of material flows and their vulnerabilities is what makes it possible for people to live in the world. The relationship between risk and action is bound to knowledge of the properties and vulnerabilities of material things. By knowing the edges of vulnerability – the point at which rain starts threatening health – estimation of a situation can allow for appropriate action. This is the knowledge which allows for management of environment, livelihood and relationships with others.

Notes on contributor

Heid Jerstad, born in 1986, is undertaking her PhD in Social Anthropology at the University of Edinburgh, with estimated end date 2015. Her work is on weather, how people live with weather and how it shapes their lives. She is investigating this through the hot, cold and rainy seasons in her fieldwork area of Himachal Pradesh, India, and through how infrastructure, work life, human-animal relations, conceptions of health and household are illuminated by an attention to weather.

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